

line of both wings dark ochreous: underside, pectus white, wings without markings, costal line of fore wings brown.

Expanse of wings $1\frac{1}{10}$ inch.

Jaintia Hills.

Mixed up with *P. ochrealis*, Moore, in some collections, but is of a different shade of colour; the scaling is different, the markings are smoother, and the shape of the fore wing different, the apex being produced to an acute angle.

VII.—*Some new African Bats (including one from the Azores) and a new Galago.* By OLDFIELD THOMAS.

Galago gallarum, sp. n.

Allied to *G. senegalensis*, *teng*, &c., but of a much paler colour.

Size about as in the species above named. Fur close, soft and velvety, the hairs of the back about 8–10 millim. in length. General colour of back nearly Ridgway's "ecru drab," the hairs in detail being dark slaty grey for their basal halves, then fulvous or cinnamon, with a whitish subterminal and a minute black terminal ring. Face rather paler; middle line of muzzle white, bordered on each side with the blackish orbital ring. Ears large, practically naked. Outer side of fore and whole of hind limbs ochre-yellow, paling on the hands and feet to yellowish white. Belly dull white, the hairs slaty based; chin, inner side of fore limbs, and inguinal region clearer white, the hairs white to their bases. Tail pale smoky grey, darkening to black on the terminal brush.

Approximate dimensions of the type (measured in skin):—

Head and body 190 millim.; tail 260; hind foot 66; ear (shrunken) 30.

A second specimen (measured in the flesh) has the following dimensions:—

Head and body 165; tail 225; ear 34.

The skull of the type is unfortunately lost and that of the second specimen much broken, so that only the following measurements can be taken on it:—

Breadth of brain-case on squamosals 22; length of parietal suture 18; upper tooth-row, from front of canine to back of *m.*³, 15; lower tooth-row, from tip of incisors to back of *m.*³, 15; combined length of three lower molars 7·2.

Hab. (type). Webi Dau, Boran Galla Country.

Type. B.M. no. 0. 3. 27. 1. Collected 19th April, 1897,

and presented by Lord Delamere. The second specimen (a male) was obtained on November 21, 1899, to the south-east of Lake Stephanie, at an altitude of 3000 feet, and was presented by Dr. Donaldson Smith. It is the *Galago galago* of my paper on the latter explorer's collection*.

This species is no doubt the Somaliland and Gallaland representative of the group of Galagos to which the names *G. galago*, *senegalensis*, *teng*, and *zanzibaricus* have been applied, but is evidently distinct from any of them. From the grey ones it differs by its drab coloration, and from the "zimmet-farbigen" *zanzibaricus* by its yellow limbs and the white subterminal bands to its dorsal hairs.

CLÆOTIS †, gen. nov. (*Rhinolophidæ*).

Allied to *Hipposiderus*, *Asellia*, and *Triænops*.

Nose-leaf tridentate, its details apparently somewhat as in *Triænops*.

Ears short, rim-like, almost without tip, their outer and inner edges arising close together.

Thumbs extremely minute.

Tail scarcely projecting from membrane.

Anterior upper premolars present, but minute. Last molars nearly as large as the penultimate.

Nasal part of skull disproportionately small and feeble. Basal region broad between bullæ, without vacuities, strongly ridged laterally.

This bat does not appear to be assignable to any known genus. Its ear-structure, described in detail below, is quite unique, the shape of the ears being in this family very characteristic of the different genera. The complicated tridentate structure of the nose-leaf recalls *Triænops*, but the proportions of the skull are very different, nor is there any trace of the remarkable vertical expansion of the zygomata present in that bat. Nor do any of the species of *Asellia* show any approximation to *Clæotis*.

It is unfortunate that the two specimens were both sent as skins, so that, although one has been softened, the nose-leaf cannot yet be accurately described in detail, nor can any figure be given.

Clæotis Percivali, sp. n.

Size very small, perhaps less than in any other member of the family. General build very light and delicate. Nose-

* P. Z. S. 1900, p. 802.

† κλοιός, a collar.

leaf with many resemblances to that of *Tricenops*, the posterior part similarly tridentate, the three points thinly hairy; below them in the middle line there is a small median projection, not so long as in *Tricenops*; in front of that, again, there is something representing the anterior median plate in *Tricenops*, but it is produced forwards into two small projecting points; horizontal horseshoe small, a narrow supplementary leaf apparently present. Outside and behind the tridentate leaf, between it and the eyes, there are two small projections covered with long hairs. Ears short, their outer and inner margins rising close together some way behind the eyes; the two margins are symmetrical with each other, rising vertically a short distance, then bending round abruptly and passing straight back to meet each other at the scarcely perceptible tip; the greatest height of the ear behind is only about one fifth higher than the point at which the two margins bend backwards in front. In fact the whole ear is very like a man's "stand-up" collar with the angles in front rounded off.

Wings very delicately made; thumbs quite minute, the terminal part free from the membrane only about 2 millim. long, including the claw. Wings attached to the distal end of the tibiae. Calcars short, reaching only about halfway up the tibiae. Tail apparently of only five joints, the last one scarcely projecting from the membrane, which is acutely pointed behind.

Fur fine, soft, and silky, about 6 millim. long on the back. Face bright buffy; crown greyish; back greyish brown, the hairs uniformly coloured. Hairs of underside slaty grey basally, yellowish white terminally.

Wing and interfemoral membranes uniformly smoky brown.

Skull with the part in front of the orbits much less broad and swollen than in other members of the family, the braincase being disproportionally large. Zygomata strongly convergent forwards. Palate ending opposite the middle of *m.*². Basal region of skull broad between the bullae, without vacuities, but with two strongly marked divergent ridges running from the base of the pterygoids to the antero-internal corners of the bullae; sphenoidal fissures large and widely open.

Upper incisors spatulate, indistinctly bicuspid. Canines with a small posterior secondary cusp at half their height. Anterior upper premolars minute, crushed in in the outer angle between the approximated canine and posterior premolar. Last molar about four fifths the size in cross-section of the

penultimate molar. Lower incisors tricuspid, overlapping. Anterior lower premolar well developed, two thirds the height of the next.

Dimensions of the type :—

Forearm 31 millim.

Head and body (in flesh) 35; tail 28; ear 8.

Skull: greatest length 13; basal length 9.5; zygomatic breadth 7; breadth above orbits 3.3; interorbital constriction 1.8; mastoid breadth 6.5; front of canine to back of *m.*³ 3.8.

Dimensions of a specimen softened and put in spirit :—

Forearm 32.

Head and body (c.) 34; tail 26; height of ear behind 5; third finger, metacarpus 26, first phalanx 10.5, second phalanx 14; lower leg 13.5; hind foot (s. u.) 5.5; calcar 8.

Hab. Takaungu, N. of Mombasa, British East Africa.

Type. Male. B.M. no. 1. 5. 1. 11. Collected 15th February, 1901, and presented by Mr. A. B. Percival.

Mr. Percival is to be congratulated on the discovery of this interesting little bat, which is widely different from anything hitherto known.

Nycteris aethiopica luteola, subsp. n.

Similar to the typical form in essential characters, but slightly larger, with longer posterior extremities, and of more yellowish coloration.

Fur soft, fine, and straight, the hairs of the back about 9 millim. in length, considerably longer than those of true *aethiopica*. Humeri and proximal halves of forearms clothed with fur, which also extends on to the wing-membrane. Base of interfemoral membrane and proximal halves of femora also hairy. Below, the fur extends further back on the wing-membrane, but less on the interfemoral than above.

General colour above dull buffy, not far from Ridgway's "clay-colour," browner posteriorly and on the humeri. Individually the hairs are glossy buff, with brown tips. Below, the colour throughout is clear buff, very near Ridgway's pl. v. fig. 13.

Ears and tragus as in true *aethiopica*. Forearms rather longer; tail, lower legs, and feet decidedly longer.

Skull similar to, but rather larger than, that of true *aethiopica*.

Dimensions of the type (in skin) :—

Forearm 56 millim.

Tail (vertebræ) 57; lower leg and foot, including claws, 36.

Skull: greatest length from occiput to tip of canines 22.2;

zygomatic breadth 13; breadth of frontal shield 7·8; upper tooth-row, from front of canine to back of *m.*³, 7·5.

The measurements of an adult spirit-specimen are given by Dobson (P. Z. S. 1879, p. 718) under the name of *N. aethiopica*. In that specimen the tail is 59 millim. long and the lower leg and foot 37, just about the same as in the type. On the other hand, in a series of true *aethiopica* from Shendy, Soudan, therefore practically topotypes, the tail does not exceed 53 millim., and the lower leg with foot 33 millim., these measurements being very uniform in all.

Hab. Kitui, British East Africa, alt. 3500 feet. Another specimen from Zanzibar.

Type. Female. B.M. no. 1. 5. 6. 4. Collected 14th February, 1901, and presented by S. L. Hinde, Esq.

The original series of *N. aethiopica*, from Kordofan, consists of three faded skins, with imperfect skulls; but fortunately, just as Mr. Hinde's specimen needed determination, the Museum has been presented by Messrs. N. C. Rothschild and A. F. R. Wollaston with a very nice set, both skins and spirit-specimens, from Shendy, on the Upper Nile, and these have enabled me to satisfy myself as to the constancy of the distinguishing characters of the new form.

As already indicated, the example from Zanzibar, referred to by Dobson (P. Z. S. 1879, p. 718), proves to belong, as might be expected, to *N. a. luteola*.

Vespertilio platyops, sp. n.

A large pale-coloured species, with the bicuspid incisors of *V. serotinus*, but with a broad blunt tragus.

Size rather less than in the Serotine. Head very flat. Ears of medium length, their inner margin strongly convex in its basal third, evenly slightly convex above to the rounded tip; outer margin slightly concave above, then convex to the notch, and ending in a low rounded lobe. Tragus broad, expanded above its broadest point at about the middle of its inner margin; inner margin straight, joining above at a rounded angle the strongly convex outer margin; a small triangular external basal lobule present.

Wings from the base of the toes. A small postcalcareaal lobule. Tail projecting from the membrane by the last vertebra.

Colour above (in spirit) uniform dull fawn or sandy; below dull whitish. Membranes brown, the plagiopatagium and interfemoral inconspicuously edged with whitish behind.

Skull very broad and flat; crests meeting posteriorly, but

not drawn out into a marked projecting angle, as in the Serotine.

Teeth very much as in the Serotine. Inner upper incisors bicuspid, outer minute. Lower incisors tricuspid, overlapping, their line more directly transverse and less angular than in the Serotine. Anterior lower molar slightly smaller in proportion to the second than in the allied species.

Dimensions of the type (in spirit):—

Forearm 46 millim.

Head and body 62; tail 39; hind foot (s. u.) 8·5; ear 16; tragus, length on inner edge 4, breadth 3; third finger, metacarpal 43, first phalanx 16, second phalanx 14; lower leg 20·5.

Skull: greatest length 19; basipalatal length 15; zygomatic breadth 14; breadth between orbits 8; constriction 4·3; palate, length 7·5; breadth across outer corners of $m.^2$ 8·5.

Hab. Lagos.

Type. Female in spirit. B.M. no. 88.5.17.3. Presented by the late Dr. G. E. Dobson.

The characters of this species are strongly confirmatory of the view that "*Eptesicus*" should not be separated from *Vespertilio*, for with the large size, heavy build, and more or less the crested skull of the former it has the broad tragus of the typical *Vespertilio*.

V. megalurus, the only other African species as large as *V. platyops*, has unicuspidate middle upper incisors.

Vespertilio minutus somalicus, subsp. n.

Closely allied to the typical *V. minutus*, Temm., but distinguished by smaller size, at least of head, and much paler coloration.

General characters as in *V. minutus*, the description of that animal in Dobson's Catalogue agreeing in all details except those referring to colour, though it may be also noticed that the inner margin of the ear, instead of being "slightly convex to the tip," is flat or even faintly concave for its middle third.

General colour of fur above dull buffy, the hairs blackish slate for two thirds of their length, with their tips buffy; beneath the bases are equally dark, the tips being dull whitish. Hairs of back rather more than 6 millim. long. Wing-membranes smoky brown, interfemoral membrane paler brown, both prominently edged with whitish, recalling the white edging of *Pipistrellus Kuhlii* on the same parts.

Skull very small and delicate, smaller than South-African

specimens, although the forearm measurement does not appear to be less. The head is therefore apparently rather smaller in proportion.

Dimensions of the type (measured in flesh):—

Forearm 31 millim.

Head and body 44; tail 35; ear 10.

Skull: greatest length 12·5; basipalatal length 9·6; zygomatic breadth 8; interorbital breadth 3·1; breadth of brain-case 6·7.

Dimensions of a spirit-specimen (♀):—

Forearm 30.

Head and body 42; tail 35; ear 11; tragus on inner edge 3·3; lower leg 13.

Hab. Somaliland. Type from Hargaisa, 3500 feet; other specimens from Berbera.

Type. B.M. no. 98. 6. 9. 1. Collected 14th November, 1897, and presented by R. McD. Hawker, Esq. Other specimens presented by E. Lort Phillips, Esq.

This subspecies may be readily distinguished from the typical form by its far paler colour and prominently white-edged wing-membranes.

Pterygistes azoreum, sp. n.

Very similar to the other species, which scarcely differ among themselves except in size, but smaller than any of them.

General characters, so far as can be made out on the single specimen, as in *P. Leisleri*, to which this form was assigned by Drouet and Peters*. But the size is markedly less, the general build is lighter, the ears appear to be rather broader and more rounded, while the tragus is slightly narrower and more pointed.

Colour, in a spirit-specimen, apparently of the usual dark brown characteristic of *Pterygistes*. Hairs of back about 6 millim. in length.

Skull, as compared with that of *P. Leisleri*, smaller and more delicate throughout, smooth, unridged, no sagittal and scarcely any lambdoid crests perceptible in an old male. Teeth practically identical throughout with those of *P. Leisleri*.

Dimensions of the type (an old male, in spirit):—

Forearm 37 millim.

Head and body 54; tail 42; ear 12; tragus, length on inner edge 3, breadth 2; third finger, metacarpus 36·5, first phalanx 15, second phalanx 10·5; fifth finger, metacarpal 31,

* Cf. Godman, Nat. Hist. Azores, p. 17 (1870).

first phalanx 8, second phalanx 4·7; lower leg 17; hind foot (s. u.) 7·7.

Skull: greatest length 14·2; basipalatal length 11; zygomatic breadth 9·4; posterior breadth 9; breadth between orbits 6·4; constriction 4·4; length of palate 5; breadth between outer borders of $m.^2$ 6·2; front of canine to back of $m.^3$ 5·1.

Hab. St. Michael's, Azores.

Type. Male. B.M. no. 65. 10. 2. 1. Collected and presented by F. DuCane Godman, Esq. One specimen only.

The single specimen has all its claws, both of feet and thumb, worn down quite blunt. Whether this is accidental or due to the nature of its habitat remains to be seen.

From the gigantic *P. maximus* and *lasiopterus*, through *P. noctula*, *stenopterus*, and *Leisleri*, there is a regular gradation in size down to this small Azorean representative of the group, all of them differing from each other in little else but size and the correlated development of the cranial ridges.

I accept with some hesitation the generic separation of the *noctula* group from *Pipistrellus*, advocated by Gray, Jerdon, H. Allen, Miller, and Méhely, on the ground that not only is the general build of the body different, but that the wings even are different in shape, owing to the reduction in length of the fifth digit. At the same time it must be admitted that some of the Indian species of *Pipistrellus*, such as *P. ceylonicus*, *chrysothrix*, *mordax*, &c., approximate to a certain extent to *Pterygistes*, and render the distinction less marked than it appears to naturalists who have only compared with each other such extreme forms as *Pterygistes noctula* and *Pipistrellus pipistrellus*.

Pipistrellus Kuhlii fuscatus, subsp. n.

Similar in all essential respects, in size, proportions, shape of ears and tragus, and in dentition, to the true *P. Kuhlii*, but distinguished by its uniform dark colour. The body is dark smoky brown above and scarcely lighter below, and the ears and volar membranes are uniformly dark slaty grey, without trace of the white edging so characteristic of *P. Kuhlii*.

Dimensions of the type (an adult male in spirit):—

Forearm 35 millim.

Head and body 45; tail 34; ear 12·5; tragus on inner edge 4; third finger, metacarpal 32, first phalanx 12, second phalanx 10; lower leg 14·5.

Hab. Naivasha, British East Africa.

Type. Male. Collected 19th October, 1900, and presented by Sir H. H. Johnston.